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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,178	02/20/2004	Jannick Rolland	UCF-371	7293
23717	7590	01/25/2006	EXAMINER	
LAW OFFICES OF BRIAN S STEINBERGER 101 BREVARD AVENUE COCOA, FL 32922			HARRINGTON, ALICIA M	
			ART UNIT	PAPER NUMBER
			2873	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

HA

Office Action Summary	Application No. 10/783,178	Applicant(s) ROLLAND ET AL.	
	Examiner Alicia M. Harrington	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7,8,10,11,23-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23,24 and 30-37 is/are allowed.
- 6) ☒ Claim(s) 7,8,10,11,25-29,38 and 39 is/are rejected.
- 7) ☒ Claim(s) 40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. <u>0106</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 25 –29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 recites a “single optical tiling system”. Claim 25 depends from claim 23 and recites “a left and right optical tiling system”. The Examiner is unclear as to applicants intended meaning, since the term “single” relates to one optical system and claim 25 denotes two optical systems. Thus, the claim is indefinite.

Claim 26 recites the limitation “said left and said right tiled optical “ in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claims 28,29 inherit their indefiniteness from claim 25 from which they depend.

Claim 27 inherits its indefiniteness from claim 26 from which it depends.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent,

except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 7,8,38,39 are rejected under 35 U.S.C. 102(e) as being anticipated by Covannon et al (US 6,543,899).

Regarding claims 7-8, Covannon discloses a method of providing a wide field of view to a head mounted display comprising the steps of:

a) combining an Artificial Reality Center (ARC-14) display component and an optical tiling component (see figure 5,7-10 for example); and,

(b) integrating said display component and said optical tiling component produce a left projected image and a right projected image, wherein an overall binocular field of view (FOV) greater than about 80 degrees (the screen spans 180 degrees) is realized from the left projected image tiled with the right projected image (see col. 5, lines 1-30, 43-60 and col. 6, lines 1-30 and col. 9).

Regarding claim 38 and 39, Covannon discloses a head projection display comprising:

An optical tiling system (see figures 5, 7-10) with left and right optical tiling;

An artificial reality center display (14-see col. 5, lines 1-30, 43-60 and col. 6, lines 1-30 and col. 9).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Covannon et al (US 6,543,899).

Regarding claim 10, the projection system comprises lens for focusing the images on the screen. Covannon discloses the projection screen at a variety distances (see figure 5 and 7-10). Covannon fails to specifically disclose the distance between the display component and optical tiling display is smaller than 150 mm. However, Covannon discloses the claimed invention except for the distance between the display component and optical tiling display is smaller than 150 mm and since it appears the system would work equally as well with optical distances of the ARC and tiling display of Covannon, the claimed feature lacks criticality.

Regarding claim 11, Covannon fails to specifically disclose compact lens is a Fresnel lens. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Covannon to include a Fresnel lens in the optical system, since it improves image contrast.

Allowable Subject Matter

7. Claims 23, 24, 30-37 are allowed.

8. Claim 40 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 25-29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: Regarding claim 23, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed limitation which included an optical projection system comprising an optical tiling system for producing a tiled projected image where the optical tiling component comprises a side projection system for projecting a side image and a top projection system for projecting a top image and a on optical tiling component having an optical cube and an optical wedge connected with said optical cube for receiving said side image and said top image as claimed. .

Conclusion

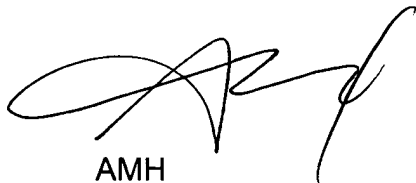
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rallison (US 6,097,544) disclose a HMD with Fresnel lens; Hong Hua et al (An Ultra light and compact design and implementations of HMD projective display-IDS article).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Harrington whose telephone number is 571 272 2330. The examiner can normally be reached on Monday - Thursday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571 272 2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AMH

Alicia M Harrington
Primary Examiner
Art Unit 2873